

What is claimed is:

1. A vacuum cleaner comprising:

a suction port defining a flow path therethrough, said suction port having a front end with a leading edge being dimensioned to contact a top portion of a carpet pile;

a vacuum blower motor operative to draw fluid into said suction port;

an agitator connected to said suction port and being dimensioned such that a distal end of said agitator contacts said top portion of said carpet pile, said agitator being adapted to pivot between a first position proximate to said leading edge and a second position;

a reciprocating member connected to said agitator for oscillating said agitator between said first position and said second position; and

whereby said leading edge moves said top portion of said carpet pile in a forward direction when said suction port moves in said forward direction.

2. The vacuum cleaner as recited in claim 1, wherein said agitator moves said top portion of said carpet pile in a rearward direction upon release of said carpet pile by said leading edge as said agitator pivots from said first position to said second position.

3. The vacuum cleaner as recited in claim 1, wherein said suction port has a rearward end with a trailing edge proximate to said second position and being dimensioned to contact said top portion of said carpet pile, whereby said trailing edge moves said top portion of said carpet pile in a rearward direction when said suction port moves in said rearward direction.

4. The vacuum cleaner as recited in claim 3, wherein said agitator moves said top portion of said carpet pile in said forward direction upon release of said carpet pile by said trailing edge as said agitator pivots from said second position to said first position.

5. The vacuum cleaner as recited in claim 1, wherein said leading edge has a longitudinal axis which is substantially planar.

6. The vacuum cleaner as recited in claim 2, wherein said agitator has a longitudinal axis, said agitator pivoting between said first position and said second position about said longitudinal axis.

7. The vacuum cleaner as recited in claim 6, wherein said agitator has a substantially planar shape.

8. The vacuum cleaner as recited in claim 4, wherein the angular movement of said agitator between said first position and said second position is less than 180 degrees.

9. The vacuum cleaner as recited in claim 8, wherein the angular movement of said agitator between said first position and said second position is less than 90 degrees.

10. The vacuum cleaner as recited in claim 2, wherein said agitator is a brush.

11. The vacuum cleaner as recited in claim 2, wherein said distal end of said agitator is formed from rubber.

12. The vacuum cleaner as recited in claim 1, wherein said reciprocating member oscillates responsive to a solenoid.

13. The vacuum cleaner as recited in claim 1, wherein said reciprocating member oscillates responsive to cam-action.

14. The vacuum cleaner as recited in claim 2, further comprising an exhaust port having a flow path defined therethrough, said vacuum blower motor operative to expel fluid out of said exhaust port and toward said suction port.

15. The vacuum cleaner as recited in claim 1, wherein said agitator is formed within said suction port.

16. A vacuum cleaner comprising:  
a suction port defining a flow path therethrough, said suction port having a front end with a leading edge and a

rearward end with a trailing edge, said leading edge and said trailing edge being dimensioned to contact a top portion of a carpet pile;

a vacuum blower motor operative to draw fluid into said suction port;

a first agitator connected to said suction port and adapted to pivot between a first position proximate to said leading edge and a second position, said first agitator being dimensioned and configured such that a distal end of said first agitator contacts said top portion of said carpet pile;

a second agitator connected to said suction port and being spaced apart from said first agitator, said second agitator adapted to pivot between a third position and a fourth position proximate to said trailing edge, said second agitator being dimensioned and configured such that a distal end of said second agitator contacts said top portion of said carpet pile;

a reciprocating member connected to said first agitator and said second agitator, said reciprocating member oscillating said first agitator between said first position and said second position, said reciprocating member oscillating said second agitator between said third position and said fourth position;  
and

whereby said leading edge moves said top portion of said carpet pile in a forward direction when said suction port moves in said forward direction and said trailing edge moves said top portion of said carpet file in a rearward direction when said suction port moves in said rearward direction.

17. The vacuum cleaner as recited in claim 16, wherein said first agitator is configured to move said top portion of said carpet pile in said rearward direction upon release of said carpet pile by said leading edge as said first agitator pivots from said first position to said second position.

18. The vacuum cleaner as recited in claim 17, wherein said second agitator is configured to move said top portion of said carpet pile in said forward direction upon release of said carpet pile by said trailing edge as said second agitator pivots from said fourth position to said third position.

19. The vacuum cleaner as recited in claim 16, wherein said first agitator and said second agitator pivot in a synchronous manner.

20. The vacuum cleaner as recited in claim 16, wherein said first agitator has a first longitudinal axis and said second agitator has a second longitudinal axis which is substantially parallel to said first longitudinal axis.

21. The vacuum cleaner as recited in claim 20, wherein said first agitator pivots about said first longitudinal axis and said second agitator pivots about said second longitudinal axis.

22. The vacuum cleaner as recited in claim 16, wherein said flow path is defined by a first wall and a second wall, said first agitator being proximate to said first wall and said second agitator being proximate to said second wall.

23. The vacuum cleaner as recited in claim 22, wherein said first agitator is pivotally connected to a distal end of said first wall and said second agitator is pivotally connected to a distal end of said second wall.

24. The vacuum cleaner as recited in claim 23, wherein said first agitator and said second agitator have a substantially planar shape.

25. The vacuum cleaner as recited in claim 23, wherein the angular movement of said first agitator between said first position and said second position is less than 180 degrees and the angular movement of said second agitator between said third position and said fourth position is less than 180 degrees.

26. A fluid recirculating cleaning device, said device comprising:

a first port defining a flow path therethrough, said first port having a front end with a leading edge being dimensioned to contact a top portion of a carpet pile;

a second port operatively connected to said first port and defining a flow path therethrough, a second port having a rearward end with a trailing edge being dimensioned to contact said top portion of said carpet pile;

a vacuum blower motor operative to draw fluid into said first port and expel fluid out of said second port;

a first agitator connected to said first port and adapted to pivot between a first position proximate to said leading edge and a second position, said first agitator being dimensioned and configured such that a distal end of said first agitator contacts said top portion of said carpet pile;

a second agitator connected to said second port, said second agitator adapted to pivot between a third position and a fourth position proximate to said trailing edge, said second agitator being dimensioned and configured such that a distal end of said second agitator contacts said top portion of said carpet pile; and

a reciprocating member connected to said first agitator and said second agitator, said reciprocating member oscillating said first agitator between said first position and said second

position, said reciprocating member oscillating said second agitator between said third position and said fourth position.

27. The device as recited in claim 26, wherein said vacuum blower motor is operative to draw fluid into said second port and expel fluid out of said first port.

28. The device as recited in claim 26, further comprising a third port operatively connected between said first port and said second port, said third port having a flow path defined therethrough, said vacuum blower motor being operative to draw fluid into said first port and said second port and expel fluid out of said third port.

29. The device as recited in claim 28, wherein said first agitator is located within said first port and said second agitator is located within said second port.

30. The device as recited in claim 29, wherein said first agitator is configured to move said top portion of said carpet pile in a rearward direction upon release of said carpet pile by said leading edge as said first agitator pivots from said first position to said second position.

31. The device as recited in claim 30, wherein said second agitator is configured to move said top portion of said carpet pile in a forward direction upon release of said carpet pile by



said trailing edge as said second agitator pivots from said fourth position to said third position.

32. The device as recited in claim 31, wherein said first agitator and said second agitator pivot in a synchronous manner.

33. The device as recited in claim 28, wherein said first agitator has a first longitudinal axis and said second agitator has a second longitudinal axis which is substantially parallel to said first longitudinal axis.

34. The device as recited in claim 33, wherein said first agitator pivots about said first longitudinal axis and said second agitator pivots about said second longitudinal axis.

35. A vacuum cleaner comprising:

a port defining a flow path therethrough, said port having moving means for moving a top portion of a carpet pile in a first direction when said port travels in a first direction and said moving means moves said carpet pile in a second direction when said port travels in a second direction;

a vacuum blower motor operative to draw fluid into said port; and

agitation means for moving said top portion of said carpet pile in a direction opposite that of said moving means upon release of said carpet pile by said moving means.